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## DETAILED DESCRIPTION

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[Detailed Description of the Invention]

[0001]

[Field of the Invention] This invention relates to a television reception display.

[0002]

[Description of the Prior Art] Multimedia information has come to be broadcast also by television broadcasting -- multi-channel CS television broadcast is realized by progress of digital technique, such as image compression, and interactive services are tried in it in recent years. The effect is demonstrated by variegated expression which combined graphics and character other than the animation and sound of the former [ multimedia information ].

[0003] Devices various in order to display these various information on one screen like before are required. For example, a screen separation is carried out and how to divide and display an animation and additional information, the method of using a general window display as GUI (Graphical User Interface) of a personal computer, etc. are considered.

[0004] Multimedia information will be displayed, when the one example is proposed as ISDB and displays many windows on a big screen.

[0005] Drawing 2 shows a conventional example. 1 -- an antenna and 2 -- a tuner and 3 -- a demodulator and 4 -- as for a loudspeaker and 8, an image and an audio decoder, and 6 are [ a remote controller and 10 ] channel selection control means a display and 9 a screen control means and 7 a transport decoder and 5.

[0006] Operation of a conventional example is explained below. The program specified by the remote controller 9, After the electric wave from a specific transponder tuned in by the tuner 2 and the channel selection control means 10 from the broadcasting electric-wave received by the antenna 1, From the transport stream produced by getting over with the demodulator 3, it is chosen by the transport decoder 4, it is decoded by an image and the audio decoder 5, and a sound is outputted via the loudspeaker 7. An image is outputted to the display 8 via the screen control means 6.

[0007] On the other hand, after the data of the additional information, character, and graphics which are transmitted in the separated form is also chosen by the transport decoder and determining a display style as an animation by the screen control means 6, it is outputted to the display 8. Drawing 3 shows the example of the image outputted to the display. It is a window of the character relevant to [ in relation to the window of video in A ] it in B, and graphics. Arrangement, the size, etc. of these windows are freely changeable via the remote controller 9

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and the screen control means 6 by a viewer's liking.

[0008]

[Problem(s) to be Solved by the Invention]In such a situation, the information relevant to a high definition big screen display will be displayed on the screen which opened the window of a split screen or many. It becomes indispensable [ a further overly high definition display ] and expensive to display an animation, and graphics and text on the window which is a part of big screen compared with the case where text is displayed on the full screen, when displaying an animation on the full screen.

[0009]Although it is comfortable for people to whom such a displaying condition was familiar with a computer on the other hand, it is inevitable in falling into the temper which a character worries for a large majority of public who got it used to seeing the conventional television, and does not settle down. The direction to which it views and listens from a distance and which displays the animation which it is more legible to look at the information expressed with many characters with a hand originally, and wants to experience the atmosphere of a movie etc. on a big screen is liked. Displaying different information suitable for such an opposite viewing condition on one screen does not adapt itself to a large majority of human beings' lifestyle. However, since differentiation with the television by the analog broadcasting from the former becomes impossible if additional information text is not displayed, the above display styles must be taken.

[0010]Causing the situation where the television of such a highly minute big screen is not received in a large majority of users, from these two faults is apprehended.

[0011]

[Means for Solving the Problem]The 1st unit that includes the 1st display that is a big screen comparatively in order that this invention may solve the above-mentioned problem, Consist of the 2nd unit including the 2nd display that is a small screen comparatively, and at least Moving image information, With this moving image information, when receiving and projecting television information including additional information separated and transmitted, moving image information is projected on the 1st display, and additional information is mainly projected on the 2nd display, respectively.

[0012]

[Embodiment of the Invention]The 1st unit in which the invention of this invention according to claim 1 includes the 1st display that is a big screen, The 1st information that consists of the 2nd unit that includes the 2nd display that is a small screen as compared with said 1st display, and includes moving image information at least, When receiving and projecting television information including the 2nd information including information other than the animation transmitted in a form with this 1st disengageable information, By considering it as the television reception display projecting the information which includes the 1st information in the 1st display and mainly includes the 2nd information in the 2nd display, respectively, and having this composition, It becomes possible to fulfill simultaneously enjoying the atmosphere of animations, such as a movie, by a big screen, and the feeling which reads a book for a short distance, without blocking it, and searches for knowledge.

[0013]Drawing 1 shows one example of this invention. 1 -- an antenna and 2 -- a tuner and 3 -- a demodulator and 4 -- a transport decoder and 5 -- an image and an audio decoder, and 7 -- a loudspeaker and 8 -- the 1st display and 9 -- a remote controller and 10 -- a channel selection control means. 11 and 12 -- as for a keyboard and 16, an additional information control means and 14 are [ the 1st unit and 18 ] the 2nd unit a mouse and 17 the 2nd display and 15 an IrDA

transmission means and 13.

[0014]Operation of this invention is explained below. Many of multimedia television broadcasting represented by digital satellite broadcasting. Various control information represented in the service information used in order to access an image, two or more programs by which speech compression was carried out, and a desired program by MPEG 2, Various additional information which furthermore complements a program is transmitted in the form of the MPEG2 transport stream by which multiplex was carried out.

[0015]This example explains such a system as an example. The program specified by the remote controller 9, After the electric wave from a specific transponder tuned in by the tuner 2 and the channel selection control means 10 from the broadcasting electric-wave received by the antenna 1, From the MPEG transport stream produced by getting over with the demodulator 3, it is chosen by the transport decoder 4, it is decoded by an image and the audio decoder 5, and a sound is outputted via the loudspeaker 7. An image is outputted to the 1st display 8. The scanning mode of the 1st display is the interlace of 525 scanning lines according to NTSC.

**[0016]On the other hand, after the data of the additional information, character, and graphics which are transmitted in the separated form is also chosen by the transport decoder, similarly an animation is sent to 12 from the IrDA transmission and reception means 11 which is an infrared-ray-communication means, and is outputted to the 2nd display 14. The scanning mode of the 2nd display is a general VGA system on a computer display.**

[0017]By generating control information, in order to select the information displayed on the 2nd display with the keyboard 15 and the mouse 16, and transmitting to the IrDA transmission and reception means 12-11, looking at this screen, Selection of additional information is possible also from the 2nd unit via the channel selection control means 10 and the transport decoder 4.

[0018]In an example, displaying [ on the 2nd display ]-by using animation as thumbnail screen \*\* is possible. This is realizable by transmitting only the main information on the animation currently projected by the 1st display (if graphical data compression is carried out by digital cosine transformation =DCT, it will be a low-frequency component) to the 2nd unit from the 1st unit via IrDA. It is possible by some change of adding the means equivalent to the screen control means in a conventional example to the 1st display to display additional information, a character, and graphics information on the 1st display. A keyboard and a mouse are not necessarily required, and if they are a means which fills the function as a means to generate a command, or a pointing device, they will not be restricted to these. It is clear for it to be able to realize, even if it uses infrared-ray-communication means other than IrDA, the means of communication by an electric wave, and the means of communication according to a cable further as an information transmission means between the 1st and 2nd unit. In the example of the above-mentioned statement, although digital television broadcast was mentioned as the example, it cannot be overemphasized that data can constitute the same reception display also to the broadcasting system by which VBI multiplex was carried out in analog television broadcasting.

[0019]

[Effect of the Invention]Since it becomes possible to fulfill simultaneously enjoying the atmosphere of animations, such as a movie, by a big screen by having constituted in this way, and the feeling which reads a book for a short distance, without blocking it, and searches for knowledge, a family can enjoy the same program by a different method simultaneously.

**TELEVISION RECEPTION DISPLAY DEVICE**

Publication number: JP11225299 (A)

Publication date: 1999-08-17

Inventor(s): SASAKI KIYOSHI

Applicant(s): MATSUSHITA ELECTRIC IND CO LTD

Classification:

- International: H04N5/445; G09G5/00; H04N5/65; H04N5/446; G09G5/00; H04N5/68; (IPC1-7): H04N5/445; G09G5/00; H04N5/68

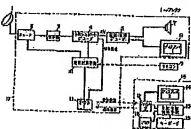
- European:

Application number: JP19980026957 19980209

Priority number(s): JP19980026957 19980209

Abstract of JP 11225299 (A)

**PROBLEM TO BE SOLVED:** To provide the television receiver where the user can feel a sense that a viewer enjoys a moving image such as a movie on a large screen and obtains intelligence from character information or the like on a small screen. **SOLUTION:** A program designated by a remote controller 9 is demodulated through a demodulator 3 and a transport stream is obtained. An audio signal that is selected by a transport decoder 4 from the obtained transport stream is outputted to a speaker 7, and a video image is outputted to a 1st display device 9 through a video/audio decoder 5. Incidental information transmitted in a separate form (such as characters and graphics or the like) is selected by the transport decoder and sent to an IrDA transmission reception means 12 from an IrDA transmission reception means 11, and outputted to a 2nd display device 14.



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することで実現できる。また、付加情報、文字、グラフィックス情報を第1のディスプレイに表示することは、従来例における画面制御手段に相当する手段を第1のディスプレイに追加するなどの若干の変更によって可能である。また、キーボード、マウスは必ずしも必要ではなく、コマンドを発生させる手段あるいはポインティングデバイスとしての機能を満たす手段であればこれらに限るものではない。また、第1、第2ユニット間の情報伝送手段としては、IrDA以外の赤外線通信手段、電波による通信手段、さらには有線による通信手段を用いても実現可能なことは明白である。さらに、上記記載の実施例においては、デジタルテレビジョン放送を例に挙げたが、アナログテレビジョン放送にデータがVBI多重された放送システムに対しても同様の受信表示装置が構成できることはいうまでもない。

【0019】

【発明の効果】このように構成したことによって、大画面で映画などの動画の雰囲気を楽しむことと、それを妨害せずに近距離で本を読み知識を求める感覚とが同時に満たされることが可能となるため家族が同時に同じ番組を異なる方法で楽しむことができる。

【図面の簡単な説明】

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【図1】本発明の一実施例を示す図

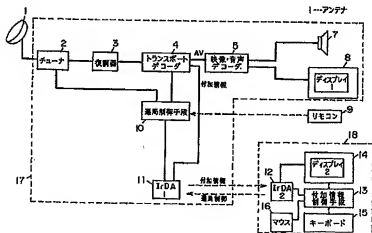
【図2】従来例を示す図

【図3】従来例におけるウインドウ表示の状態を示す図

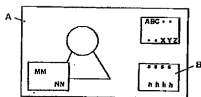
【符号の説明】

- 1 アンテナ
- 2 チューナ
- 3 復調器
- 4 トランスポートデコーダ
- 5 映像・音声デコーダ
- 6 画面制御手段
- 7 スピーカ
- 8 ディスプレイ
- 9 リモートコントロール
- 10 選局制御手段
- 11、12 IrDA伝送手段
- 13 付加情報制御手段
- 14 第2のディスプレイ
- 15 キーボード
- 16 マウス
- 17 第1ユニット
- 18 第2ユニット

【図1】



【図3】



【図2】

